

What is claimed:

1. A rare-earth compound selected from the group consisting of rare earth anhydrous oxycarbonate and rare earth hydrated oxycarbonate, with a surface area of at least 10 m²/g, suitable for the removal of phosphate from water.
- 5 2. A rare-earth compound selected from the group consisting of rare earth anhydrous oxycarbonate and rare earth hydrated oxycarbonate, manufactured as agglomerates of 1 to 1000 μm in size, suitable for the removal of phosphate from water.
- 10 3. The compound of claim 1 or 2, where the rare earth is selected from the group consisting of lanthanum, cerium and yttrium.
4. The compound of claim 1 or 2, where the rare earth is lanthanum.
- 15 5. The compound of claim 1 or 2, where the compound is a particle with a porous structure.
6. The compound of claim 5, where the porous structure is made by total
20 evaporation of a rare-earth salt solution, followed by calcination.
7. The compound of claim 6, where the total evaporation step is conducted in a spray dryer.
- 25 8. The compound of claim 6, where the evaporation temperature is between about 120° and 500°C.
9. The compound of claim 6, where the calcination temperature is between about 400° and about 1200 °C.
- 30 10. The compound of claim 6, where the porous particles have a size between 1 and 1000 μm.

11. The compound of claim 10, where the particles are formed from individual crystals having a size between 20 nm and 10 μ m.
- 5 12. The compound of claim 7, where the product is made of spheres or parts of spheres.
13. The compound of claim 6 wherein the rare earth salt solution is a rare earth acetate.
- 10 14. The compound of claim 6 wherein the rare earth salt solution is neutralized with sodium carbonate, followed by washing, filtering and drying.
- 15 15. The compound of claim 14 wherein the neutralization process takes place at a temperature between 30° and 90°C.
16. The compound of claim 15 wherein the drying takes place at a temperature of about 100° to 120°C.
- 20 17. The compound of claim 16 wherein the drying takes place for a period of about 1 to 5 h.
18. A method of preventing algal growth in swimming pools and other water systems comprising providing an effective amount of the compound of claim 1 or 2.
- 25 19. The method of claim 17 wherein the compound exhibits a low solubility in water.
20. The method of claim 17 wherein the compound is added in the filtration system of a swimming pool.
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